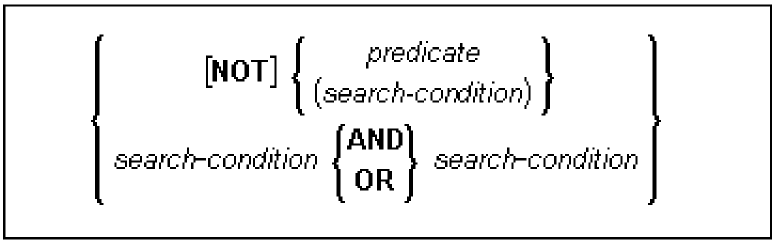
Search Conditions

search-condition



A *search-condition* can consist of a simple *predicate* or of multiple *search-conditions* combined with the Boolean operators AND, OR and NOT, and parentheses if required to indicate a desired order of evaluation.

Example:

```
DEFINE DATA LOCAL
01 NAME   (A20)
01 AGE    (I2)
END-DEFINE
...
SELECT *
  INTO NAME, AGE
  FROM SQL-PERSONNEL
  WHERE AGE = 32 AND NAME > ’K’
END-SELECT
...
```

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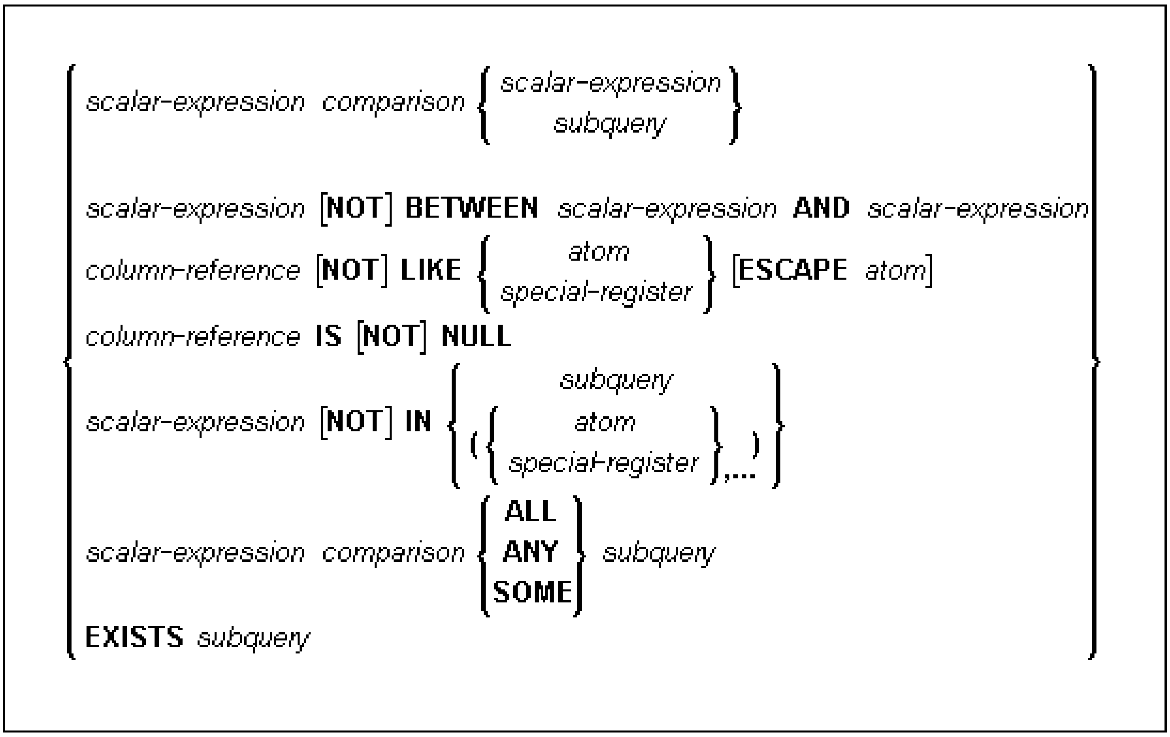
predicate



scalar-expression comparison { *scalar-expression* | *subquery* }

scalar-expression [**NOT**] **BETWEEN** *scalar-expression* **AND** *scalar-expression*

column-reference [**NOT**] **LIKE** { *atom* | *special-register* } [**ESCAPE** *atom*]

column-reference **IS** [**NOT**] **NULL**

scalar-expression [**NOT**] **IN** { *subquery* | ({ *atom* | *special-register* },...) }

scalar-expression comparison { **ALL** | **ANY** | **SOME** } *subquery*

EXISTS *subquery*

A *predicate* specifies a condition that can be "true", "false" or "unknown". In a *search-condition*, a *predicate* can consist of a simple or complex comparison operation or other kinds of conditions.

Example:

```
SELECT NAME, AGE
  INTO VIEW PERS
  FROM SQL-PERSONNEL
  WHERE AGE BETWEEN 20 AND 30
    0R AGE IN ( 32, 34, 36 )
    AND NAME LIKE ’%er’
    ...
```

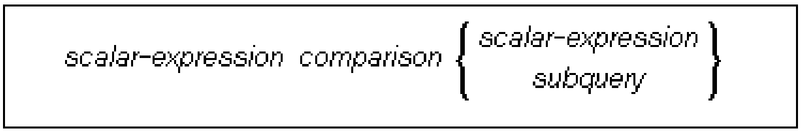
Note:
The percent sign (%) may conflict with Natural terminal commands. If so, you must define a terminal command control character different from "%" (see also the session parameter CF in the Natural Reference documentation).

The individual predicates are explained on the following pages (for further information on predicates, please refer to the relevant literature). According to the syntax above, they are called as follows:

- Comparison Predicate
- BETWEEN Predicate
- LIKE Predicate
- NULL Predicate
- IN Predicate
- Quantified Predicate

- EXISTS Predicate

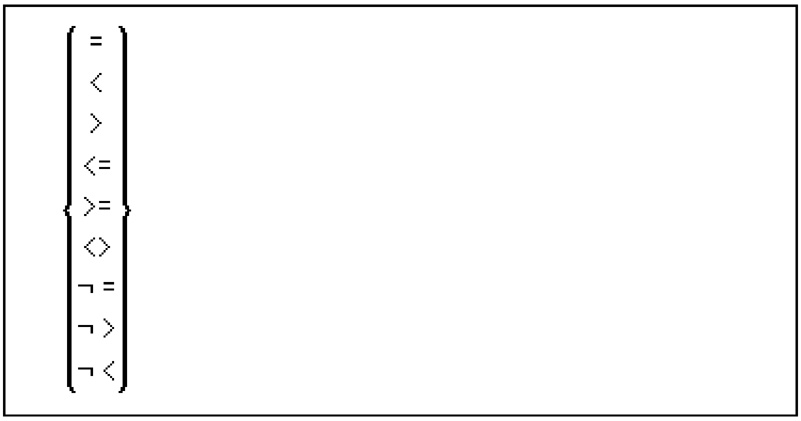
Comparison Predicate



A comparison predicate compares two values.

See information on scalar-expression.

comparison



Comparison can be any of the following operators:

=	equal to
<	less than
>	greater than
<=	less than or equal to
>=	greater than or equal to
< >	not equal to
¬ =	not equal to
¬ >	not greater than
¬ <	not less than

subquery

```
(select-expression)
```

A *subquery* is a *select-expression* that is nested inside another such expression.

Example:

```
DEFINE DATA LOCAL
1 #NAME    (A20)
1 #PERSNR  (I4)
END-DEFINE
...
SELECT NAME, PERSNR
  INTO #NAME, #PERSNR
  FROM SQL-PERSONNEL
  WHERE PERSNR IN
    ( SELECT PERSNR
        FROM SQL-AUTOMOBILES
        WHERE COLOR = 'black' )
        ...
END-SELECT
```

See further information on Select Expressions.

BETWEEN Predicate

```
scalar-expression [NOT] BETWEEN scalar-expression AND scalar-expression
```

A BETWEEN predicate compares a value with a range of values.

See information on scalar-expression.

LIKE Predicate

```
                                {      atom        }
column-reference [NOT] LIKE     { special-register } [ESCAPE atom]
```

A LIKE predicate searches for strings that have a certain pattern.

For information on *column-reference* , *atom* and *special-register*, see the section Scalar Expressions.

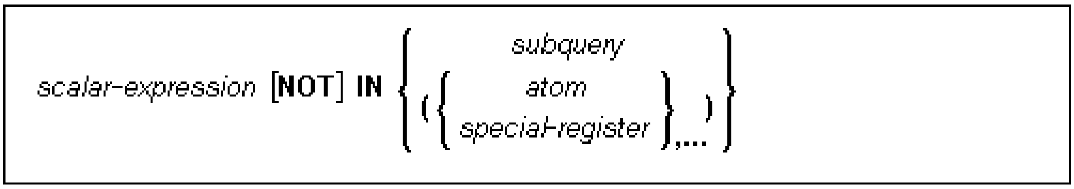
NULL Predicate

```
column-reference IS [NOT] NULL
```

A NULL predicate tests for null values.

See information on column-reference.

IN Predicate

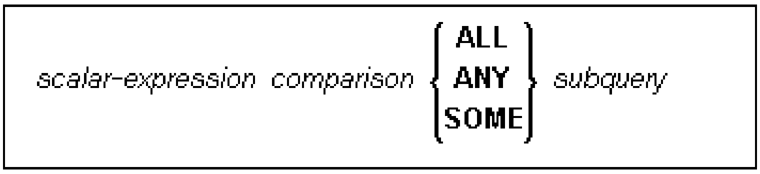


An IN predicate compares a value with a collection of values.

For information on *scalar-expression*, *atom* and *special-register*, see the section Scalar Expressions.

See information on subquery.

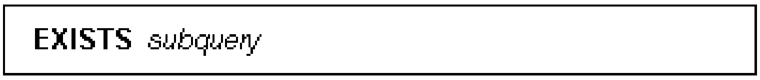
Quantified Predicate



A quantified predicate compares a value with a collection of values.

See information on scalar-expression, on comparison, and on subquery.

EXISTS Predicate



An EXISTS predicate tests for the existence of certain rows.

The EXISTS predicate evaluates to true only if the result of evaluating the *subquery* is not empty; that is, if there exists at least one record (row) in the FROM table of the *subquery* satisfying the search condition of the WHERE clause of this *subquery*.

Example of EXISTS:

```
DEFINE DATA LOCAL
1 #NAME    (A20)
END-DEFINE
...
SELECT NAME
  INTO #NAME
  FROM SQL-PERSONNEL
  WHERE EXISTS
    ( SELECT *
      FROM SQL-EMPLOYEES
      WHERE PERSNR > 1000
        AND NAME < ’L’ )
        ...
END-SELECT
...
```

See information on subquery.